From: **Jeanne Zokovitch Paben** <jeanne.pabenlaw@gmail.com>
Date: Wed, Oct 30, 2024 at 2:57 PM

Subject: Lockheed Contamination in Tallevast: Comments from Consent Order Consultant Ramboll on Lockheed's 2024 Wetlands Monitoring Report

To: Bland, Mike <Mike.Bland@floridadep.gov>, <philip.wilkerson@floridadep.gov>, Sellers, Robert <Robert.Sellers@floridadep.gov>, Smith, Leah J. <Leah.J.Smith@floridadep.gov>, Bahr, Tim <Tim.Bahr@floridadep.gov>

Mike and Bob,

On behalf of Laura Ward and Wanda Washington as Co-Executive Directors of FOCUS and the Tallevast community attached are comments from Ramboll, the scientific consulting firm under Lockheed's consent order with the State, regarding Lockheed's 2024 Wetlands Monitoring Report. We again reiterate our request for consideration of these comments in FDEP following up with Lockheed and stress the importance of FDEP and Lockheed engaging with the affected community. We hope to hear from you this week about a time for a meeting.

Sincerely,
Jeanne

RAMBOLL

ENVIRONMENT
& HEALTH

Ms. Wanda Washington

FOCUS
PO Box 28
Tallevast, FL 34270

Re: Review of the 2024 Annual Wetlands Monitoring Report,
Lockheed Martin Tallevast Site, Manatee County Florida

September 26. 2024

Dear Ms. Washington,

At your request, I have reviewed the 2024 Annual Wetlands Monitoring Report (the "2024 WMR"), recently prepared on behalf of Lockheed-Martin for the Tallevast Site (AECOM, August 29, 2024). This Report documents the results and interpretations of the recent monitoring of wetland conditions around the Tallevast Site and the potential impacts of the ground water pumping for remediation of the contamination historically released at the LMC facility on Tallevast Road. As a result of my review, I would offer the following observations and comments.

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The monitoring documented by AECOM appears, in general, to be following the approved permits and plans for assessment of wetland impacts. This report covers the past year but also provides longer-term data on trends in wetland conditions and ground water levels in the surrounding Upper Shallow Aquifer System (USAS).

In this reporting period a new reference wetland (RW-6) was added to the monitoring program. It is located northeast of Target Wetland 6 (TW-6) on the north side of Tallevast Road. This same wetland was historically monitored as a Targeted Wetland (TW-2) in the earlier more extensive wetlands monitoring program. This new RW replaces RW-3, which was lost due to the development of a property south of TW-6. This seems like a reasonable choice for the new referenced wetland as it lies north of Tallevast Road, outside the area most affected by the pumping.

TW-6, which is located on the south side of Tallevast Road and east of the LMC facility, is the principal wetland now used to monitor impacts from pumping water from the Groundwater Recovery and Treatment System (the GRTS) in the Upper Shallow Aquifer System. TW-6's water supply is supported by direct rainfall, by surface water runoff draining from immediately adjoining properties along the Tallevast Road ROW, the local water table aquifer system, and artificial infiltration from the RC-7002 gallery which borders the south side of the wetland.

The water table around TW-6 is drained by pumping from two galleries (EW-2103 and EW-2104) in the USAS, which are located in a pasture

immediately to the south. This pumping lowers the water table and diminishes the water supply to the wetland by increasing the rate of seepage from the wetland to the water table. To offset this seepage and support the local water table around the wetland, treated water is discharged to the RC-7002 infiltration gallery. Also negatively affecting the wetland's water supply is the development of the property east of TW-6 by Amazon. Storm drainage systems on this property now intercept the surface runoff from the eastern extension of Tallevast Road that formerly flowed to the wetland. This has reduced the supply of water to the wetland by perhaps 300,000 to 750,000 gallons per year, a number which is small in comparison to the water drained by pumping and the resupply volumes provided through the RC-7002 infiltration gallery.

Pre-pumping (i.e. pre-2013) water level records shown in Appendix D of the 2024 WMR demonstrate that ground water and seasonal surface runoff in and around TW-6 normally maintained a wet/saturated (and in some deeper areas ponded) condition in the Summer and Fall months, followed by a period of drying later in the Winter and following Spring. Local groundwater levels would typically vary by three to five feet over this seasonal cycle. Once GRTS pumping began circa 2013 the wetland was partially, artificially maintained by returning treated water to the RC-7002 gallery at typical rate of 800,000 to more than 1,000,000 gallons per month. This range of supply was seemingly sufficient to maintain a wet condition in the wetland with normal amounts of seasonal rainfall, albeit causing a somewhat reduced range of water level cycling over a full annual period (i.e. the wetland did not dry out as much in the Winter and Spring when it was being artificially controlled). This allowed the quality and character of the vegetation in the wetland to be maintained in more-or-less the same condition as in the pre-pumping period.

After the use of RC-7002 was curtailed in 2019 while the pumping continued and increased[1], the wetland became dry most of the year, with ponded water present for only brief periods following heavy rainfall (i.e., with the passage of tropical storms). This continued until late 2023 during which time the ground water levels around the wetland remained well below the long-term norms. This multi-year period of drier conditions allowed upland vegetation to begin overgrowing the historic wetland boundaries.

Following the restarted use of the RC-7002 gallery in January 2023, ground water levels in the surrounding USAS began to partially recover. Throughout the subsequent (post January 2023) monitoring period, however, the wetland apparently did not exhibit any sustained ponded surface water, and groundwater levels continued below normal well into the second half of 2023. During this time, the infiltration gallery was receiving 300,000-600,000 gallons per month of return flow, or about half of the supply normally being provided pre-2019. This record clearly demonstrates that this amount of water is insufficient to maintain the wetland under the current rates of GRTS pumping.

Beginning in December 2023 the return flow to the RC-7002 gallery was increased to 1,200,000 gallons per month and later in the Spring 2024 to as much as 1,800,000 gallons per month, causing the local water table to rise back to more seasonal norms. This increased flow was in response to a regionally lower water table due to the pumping and also a prolonged period of

[1] In 2019 the rate of pumping was increased in the nearby GRTS galleries (EW-2103 and -2104) to extend the capture zone of the GRTS farther south. The combined pumping in these galleries was thereafter approximately 40 percent higher as compared to the prior years.

drought in 2023 and into the Spring of 2024.[2] With this much-higher rate of discharge to the RC-7002 gallery, the combined effects on the water supply to the wetland from the pumping, the extended drought, and to a lesser degree the loss of runoff from Tallevast Road to the east with the Amazon development, appears to have been finally counteracted and water levels are now returning to a more normal condition. At the same time there are initial indications that the encroachment of upland vegetation into the deeper parts of the wetland may be stabilizing and reversing past trends.

Reports by local residents bordering the wetland indicate that the area around TW-6 is now quite saturated with the heavier rainfall over this past (2024) summer being added to the increased gallery discharges. Based on recent communications with Paul Calligan I understand that no water has been supplied to the RC-7002 gallery since the passage of TS Debbie over the Mantee County area in August 2024. It is appropriate that LMC is currently exercising a degree of manual control over the gallery flows to avoid overloading the wetland area with too much water, which could lead to localized flooding and/or property damage. I understand the gallery will eventually be returned to more normal (automatic) operations as the water table begins to recede with the advent of the dry season this Fall (2024).

Going forward it would be ideal if the RC-7002 gallery could be operated in a manner to restore the natural seasonal hydroperiod of the wetland exhibited in the pre-GRTS record by adjusting seasonal inflows after considering rainfall amounts over the prior six months. Prior to the commencement of pumping, the wetland typically had water levels at or slightly above normal pool in the summer rainy season and portions of the trailing Fall months, but then was partially drained and drier outside the deeper excavated areas in the Winter and Spring months when rainfall is typically lower. Although the historic hydroperiod has not been the focus of the wetland monitoring program to date[3], continuation of the type of “manual” oversight LMC is currently exercising to the supply of water to the RC-7002 gallery could be helpful going forward, in order to ensure a more natural wetland seasonal hydroperiod is maintained in TW-6.

If you have any questions regarding these observations and comments, I would be happy to discuss them with you further.

Very truly yours,

Robert L Powell PhD, PE
Principal

[2] Assuming a full supply of water is provided by the plant operators, the flow of water into RC-7002 is automatically controlled by a float actuated valve set to maintain a target level of water in the drain (personal communication from Paul Calligan). A lowered water table in the surrounding aquifer would cause the rate of seepage from the drain to increase. As the water table rises with increased rainfall, as typically occurs with the summertime rainy season, the flow of water to, and hence from, the drain should decrease.

[3] Monitoring has focused instead on vegetation changes as the primary measure of wetland impacts.